

INVESTIGATOR'S ANNUAL REPORT

National Park Service

All or some of the information provided may be available to the public

Reporting Year: 1993	Park: Shenandoah NP
Principal Investigator: C. Dolloff	Office Phone: (703)231-4864 Email: n/a
Address: Virginia Tech & State Universi Dept of Fisheries & Wildlife S Blacksburg, VA 24061-5360 VA	Office Fax: n/a
Additional investigators or key field assistants (first name, last name, office phone, office email): Name: Mr Kurt Newman Phone: n/a Email: n/a Name: Dr James Galloway Phone: n/a Email: n/a	
Permit#: SHEN1993AGQD	
Park-assigned Study Id. #: unknown	
Project Title: Basinwide Estimation of Habitat and Fish Production in Shenandoah National Park. Distribution and Habitat Utilization of Blacknose Dace (Rhinichthys atratulus) in Acid Sensitive Streams of the Shenandoah National Park	
Permit Start Date: Jan 01, 1998	Permit Expiration Date Jan 01, 1998
Study Start Date: Jan 01, 1992	Study End Date Jan 01, 1996
Study Status: Completed	
Activity Type: Other	
Subject/Discipline: Air Quality	
Objectives: In conjunction with the Environmental Sciences Department at University of Virginia, evaluate the impact of acid precipitation on the distribution, abundance, and production of fish in selected SNP watersheds.	
Findings and Status: Analysis of the summer survey completed from May 1, 1993 through August 31, 1993 on these systems showed that the total available habitat in Paine Run was 32,944.27 m2, Staunton River 32,791.52 m2, and Piney River 28,056.13 m2. Pool to riffle ratios based on total habitat area in the main branch of each stream ranged from 0.43 in Piney River to 0.71 in Paine Run. Species richness was lowest in Paine Run (s=3), and the same in each of the other streams (s=5). The Jaccard similarity index (JSC) of community composition between Paine Run and each of the other streams is 0.33, while the JSC between Staunton River and Piney River is 0.67. Brook trout (Salvelinus fontinalis) and blacknose dace (Rhinichthys atratulus) were the only species found in all three watersheds. Summer population estimates for brook trout in the main branch of each stream ranged from 4.5/100 m2 in Paine Run riffles to 40.1/100 m2 in Staunton River pools. Blacknose dace populations ranged from 1.7/100 m2 in Staunton River riffles to 22.2/100 m2 in Paine Run pools. Sampling during the fall, winter, and spring should reveal seasonal differences and estimate production.	
For this study, were one or more specimens collected and removed from the park but not destroyed during analyses? No	
Funding provided this reporting year by NPS: 22000	Funding provided this reporting year by other sources: 7000
Fill out the following ONLY IF the National Park Service supported this project in this reporting year by providing money to a university or college	

Full name of college or university: VPI & SU	Annual funding provided by NPS to university or college this reporting year: 4000
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